Interact, play, explore - by means of interactive computer game technologies!

This is the spirit of our new master’s program in computer science, which acknowledges the growing impact of interactive computer games technologies in our society. It is settled in a booming industry, far exceeding the classical game market, rushing towards new applications of interactive computer games technologies for problem-solving, education and training as well as movie entertainment.

Informatics: Games Engineering is an international and interdisciplinary field of science, and a master’s degree in this field from TUM will enable you to work and to pursue research in a multitude of different application domains worldwide. Studying games engineering requires profound knowledge of the foundations of computer science, good programming skills, as well as your interest and ability to understand and apply concepts from other scientific disciplines to solve games-specific problems. You are required to have completed, or be about to complete, a bachelor’s degree in Informatics: Games Engineering, computer science, or a similar computer-related field.

Profile of the Program

Duration of study: 4 semesters
Degree: Master of Science
Start: summer and winter semester
Application Deadline: winter semester May 31, summer semester November 30
Application/Admission: Aptitude test, further information: www.in.tum.de/en/application
Costs per Semester (currently): 52 € for the student union + 59 € basic semester ticket
Teaching Language: German and English - possible to study completely in English
Further Information: www.in.tum.de/Master_Informatics_Games_Engineering

Contact

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Content and Program
Games Engineering deals with the theoretical foundations of interactive computer games technologies and their technical realization through software and heterogeneous computing devices, multi-sensory interfaces, and display systems. Modern games engineering combines fundamental concepts of computer science, physics and mathematics in due consideration of hardware-specific aspects. The master’s program equips students with the technical skills and knowledge required to design and realize the technical infrastructures underlying modern computer games, to transfer their skills and knowledge to new application domains, and to eventually discover ways to integrate computer games technologies into other research and application areas as well as into everyday life.

The research-oriented master’s program builds on the fundamentals of computer science and games engineering you have acquired during your undergraduate studies. It is a flexible program that allows you to structure your studies towards your preferred sub-areas of interest in the particular area of games engineering. Besides the mandatory courses (such as image synthesis and two large master lab-courses in games engineering), it offers several areas of specialization such as computer-graphics and animation, visual computing (computer vision and intelligent image processing), game-theory & algorithmic economics, internet models, technologies and applications, autonomous systems (artificial intelligence, robotics, and machine learning), modern database systems, numerics and simulation as well as hardware-related programming from which you have to choose your two favourite ones.

Competence
The Department of Informatics is one of the largest and most renowned informatics departments in Germany, and our professors and teaching staff are experts in their respective fields. Students of our master’s programs receive a top-level education and can tailor their program to focus in depth on the topics that interest them most. Our strong partnerships to IT-companies guarantee a practice-oriented education.

Perspectives
As a graduate of this master’s program you are especially qualified for working in the booming games industry. Additionally, with the general knowledge and skills acquired you can succeed in the classical IT industry, or in industries like automotive, aircraft, plant engineering, banking, and management consulting. After successfully completing this program you have the proficiency and general problem solving skills needed to do management-level work. Furthermore, you may pursue with a Ph.D. in computer science and choose a career in a research institution.

Reasons for Studying at the TUM
Competence: one of the largest and most important departments in informatics in Germany, research and teaching in nearly all related disciplines
Quality: top-rankings from alumni, employers, as well as human development experts
Industrial collaborations: industrial collaborations with established international companies, EU Atlas of ICT hotspots: Munich ranks in 1st place
Practical experience: student research projects in companies
Individual support: summer schools, mentoring, TUM: Young Academy, TUMentrepreneurship, Center for Digital Technology and Management
Interdisciplinary skills: teamwork, presentation techniques, management and personality training, language courses
Study abroad: over 70 European and 100 other partner universities worldwide
Direct and individual: small tutorial groups, student advisory service, infopoint, career services
Family-friendly department: flexible child care, study program leave of absence due to family reasons, lectures are partly available online
Munich as a versatile place of study: one of the most favoured places of study in Germany, offering a wide variety of cultural, sporting and leisure activities
Excellent career perspectives: due to a shortage in skilled personnel in the field of information technology